

APPENDIX E

CURRENT SYSTEMS QUESTIONNAIRE

ED currently uses 16 major information systems to administer and manage the student financial aid programs authorized under Title IV of the Higher Education Act of 1965, as amended. These systems are used by the postsecondary education community to interact with and support prospective students, students, and their families. This appendix contains the questionnaire used to gather information regarding these systems.

Introduction

This questionnaire is being used to gather technical information regarding current Title IV systems. Questionnaire responses will help the Project EASI team to better understand the technical environments on which Title IV systems are based. Responses to this questionnaire, along with identified requirements, will be used to develop alternative technical architectures for the target system being defined by the Project EASI team.

Instructions

Attached to this questionnaire please find a set of tables. These tables describe the Project EASI team's current understanding of the Title IV system technical environments. Please review these tables and use the questionnaire to:

- Provide information that is not listed within the tables.
- Correct inaccurate information listed in the attached tables.
- Certify the information listed within the attached tables.

When completing the questionnaire, please provide responses for only those Title IV systems with which you are directly associated. To the best of your ability, please complete the entire questionnaire and return it by May 19, 1997. Thank you for your time and consideration. Your cooperation is appreciated.

System Identification

A. Using the following list, please identify the system that will be described in this questionnaire (Check only one):

- | | |
|---|---|
| <input type="checkbox"/> Campus Based System | <input type="checkbox"/> Federal Family Education Loan System |
| <input type="checkbox"/> Central Processing System | <input type="checkbox"/> Institutional Data System |
| <input type="checkbox"/> EDExpress | <input type="checkbox"/> Multiple Data Entry System (ACT) |
| <input type="checkbox"/> Central Database Direct Loan System | <input type="checkbox"/> Multiple Data Entry System (I-NET) |
| <input type="checkbox"/> Direct Loan Origination System | <input type="checkbox"/> National Student Loan Data System |
| <input type="checkbox"/> Direct Loan Servicing System (CDSI) | <input type="checkbox"/> Pell Grant Recipient/Financial Management System |
| <input type="checkbox"/> Direct Loan Servicing System (EDS) | <input type="checkbox"/> Postsecondary Education Participants System |
| <input type="checkbox"/> Direct Loan Servicing System (ELSC) | <input type="checkbox"/> Title IV wide Area Network |
| <input type="checkbox"/> Direct Loan Servicing System (E-Systems) | |

System Functions

- A. The EASI vision is organized in terms of six functional areas. These areas are listed within the following table. Using this table please indicate which of these functions are performed by the system. Additionally, please indicate the percentage of system operation dedicated to supporting each of the identified functional areas.

Functional Area	Description	% of
<input type="checkbox"/> and Oversight.	The functions used to make and implement decisions necessary they accomplish the desired goals, and to ensure that participants are complying with the program rules.	
Information Sharing	support postsecondary education organizations and customers throughout the life cycle.	
Applying	institution, apply for student financial assistance, and the associated processes that lead to aid origination.	
Disbursing funds	deliver funds to schools and to students, and to appropriately perform funds management.	
Repayment	The functions associated with initiating repayment, supporting repayment, handling deferment and forbearance requests, and	
<input type="checkbox"/> and Reporting	The functions used to monitor student enrollment status and to status so that they can correctly manage loans.	

If you can provide any other relevant “system function” information, please do so on the following lines.

System Processing

- A. The following table lists system processing models. Using this table, please indicate which processing model(s) is used by the system. Additionally, please indicate the percentage of system operation performed using the identified processing models.

Processing Model	Description	% of Operation
<input type="checkbox"/> Batch	The user has no immediate capability to change system data. This model allows batch file updating, as well as batch data entry, validation, and collection. Data is processed at a scheduled intervals. Online inquiry capabilities are not available.	
<input type="checkbox"/> Batch with Online Data Collection	The user has no immediate capability to change system data. This model allows batch file updating, and on-line data entry/collection. Transactions are entered and transferred to either a tape or disk file. Later, the transactions are edited and stored in a posting file for subsequent batch file update of system data.	
<input type="checkbox"/> On-line Inquiry	The user has no immediate capability to change system data. This model allows on-line inquiry with batch data entry and file updating. The can access the computer and review data managed by the system (as of the last update), but cannot immediately modify system data. To modify data managed by the system, batch processes must be used.	
<input type="checkbox"/> On-line Inquiry and Data Collection	The user has no immediate capability to change system data. This model allows on-line inquiry, batch file updating, and on-line data entry, data validation and data collection. Transactions are entered and transferred to either a tape or disk file. Later or at the time of entry, the transactions are edited and stored in a posting file for subsequent batch file update of system data.	
<input type="checkbox"/> Real-Time Control	The user has the capability to immediately change system data. This model allows on-line inquiry, data entry, and file updating. The user uses directly updates the computer files by entering one transaction at a time. In such a system, there may not be any batch controls.	
<input type="checkbox"/> Remote Job Entry	The user has no immediate capability to change system data. Data from remote locations is entered in batches, e.g., the operator enters a batch update, which is reconciled and processed at a scheduled time.	

If you can provide any other relevant "system processing" information, please do so on the following lines.

System Distribution

- A. Models for system distribution* are listed in the following table. Using this table, please indicate which distribution model the system is based on.

Distribution Models	Description
<input type="checkbox"/> Monolithic	All logic, including presentation, application, and data management, is performed on the server side of the network. The client side of network is typically a dumb terminal (VT100 or 3270).
<input type="checkbox"/> Distributed Presentation	All but part of the user interface is located on the server side of the network. Specifically, the presentation management subsystem resides on the client. Part of the logic associated with end-user presentation resides on the client side of network, part on the server. The application logic and the database reside on the server side of the network. "Screen scrapping" is an example of this model –e.g., the server prepares a terminal data stream intended for a dumb terminal (e.g., a VT100 or a 3270) but the client does not display it in raw form. Rather, the client extracts data fields and creates a new interface for the user.
<input type="checkbox"/> Remote Presentation	Application code and data management software executes on the server. All software used for screen painting, including the application logic for presentation and presentation management, resides on the client side of network. This distribution model is sometimes referred to as "thin client." Systems using PC X server based clients are examples of this model.
<input type="checkbox"/> Distributed Logic	Application logic is split across the server and client sides of the network. The application code on the server side is normally related to data I/O. This code can be system specific stored procedures, transaction processing logic, or application logic used throughout an enterprise. Application code associated with user I/O resides on the client.
<input type="checkbox"/> Remote Data Management	Application and data management functions are physically separated; the user interface and application are on the client side of network, the data management software and data reside on the server side of the network. This distribution model is sometimes referred to as "fat client." This is currently the most commonly used client/server model used today.
<input type="checkbox"/> Distributed Data Management	System data management software and data reside on both the client and server sides of the network.
<input type="checkbox"/> Other:	(Please describe)

* These models are based on the idea that systems include three major components:

1. The "presentation" component or user interface, which manages the dialogue between the system and the end user.
2. The application logic – the COBOL code, C code, 4GL code – which performs the actual data transformations that make the system work.
3. The data management or database management software typically obtained from a vendor and then populated with agency, department, or company data, which manages data access and updating by the application logic.

If you can provide any other relevant "system distribution" information, please do so on the following lines.

System Software Technology

- A. Using the following table, please indicate how system functionality is implemented? Additionally, please indicate the percentage of system software implemented with COTS/package software and customer software.

Software Type	Software Type Description	% of System Software
<input type="checkbox"/> Custom Software	Systems specifically developed to support the unique needs of a business.	
<input type="checkbox"/> COTS/Packaged Software	Commercial off the Shelf software packages. Software packages acquired from an outside vendor to meet specific needs of a business.	

- B. Please use the following table to provide information regarding custom system software. Specifically, please indicate the languages (COBOL, C, etc.) and the approximate total source lines of code used to implement custom system software components.

Language(s)	Source Lines of Code
1.	
2.	
3.	
4.	
5.	

- C. Please use the following table to identify data management software (relational database management systems, transaction processing monitors, etc.) used by the system. Additionally, please provide a brief description of all data management technologies that are listed.

Data Management Software	Description
1.	
2.	
3.	
4.	
5.	

- D. Using the following table, please list integrated COTS/package software that is used to implement system functionality. Additionally, please provide a brief description of each COTS/package software solution listed.

COTS/Package Software	Description
1.	
2.	
3.	
4.	
5.	

- E. Using the following table, please list system management software solutions used to manage the system. Additionally, please indicate (check) the functions performed by the identified system management software solutions.

System Management Software	Functions Performed
1.	<input type="checkbox"/> System/Performance Monitoring <input type="checkbox"/> Software Distribution <input type="checkbox"/> Accounting <input type="checkbox"/> Configuration Management <input type="checkbox"/> Problem Reporting <input type="checkbox"/> Help Desk Operations <input type="checkbox"/> Hardware/Software Asset Inventory/Management <input type="checkbox"/> Other (Please specify):
2.	<input type="checkbox"/> System/Performance Monitoring <input type="checkbox"/> Software Distribution <input type="checkbox"/> Accounting <input type="checkbox"/> Configuration Management <input type="checkbox"/> Problem Reporting <input type="checkbox"/> Help Desk Operations <input type="checkbox"/> Hardware/Software Asset Inventory/Management <input type="checkbox"/> Other (Please specify):
3.	<input type="checkbox"/> System/Performance Monitoring <input type="checkbox"/> Software Distribution <input type="checkbox"/> Accounting <input type="checkbox"/> Configuration Management <input type="checkbox"/> Problem Reporting <input type="checkbox"/> Help Desk Operations <input type="checkbox"/> Hardware/Software Asset Inventory/Management <input type="checkbox"/> Other (Please specify):
4.	<input type="checkbox"/> System/Performance Monitoring <input type="checkbox"/> Software Distribution <input type="checkbox"/> Accounting <input type="checkbox"/> Configuration Management <input type="checkbox"/> Problem Reporting <input type="checkbox"/> Help Desk Operations <input type="checkbox"/> Hardware/Software Asset Inventory/Management <input type="checkbox"/> Other (Please specify):

- F. Please use the following table to list archive management (storage management, data backup/recovery, etc.) software solutions used to manage the system. Additionally, please indicate system components managed with this software.

Archive Management Software	Systems Archived
1.	<input type="checkbox"/> System Clients <input type="checkbox"/> System Servers <input type="checkbox"/> Other (Please specify):
2.	<input type="checkbox"/> System Clients <input type="checkbox"/> System Servers <input type="checkbox"/> Other (Please specify):
3.	<input type="checkbox"/> System Clients <input type="checkbox"/> System Servers <input type="checkbox"/> Other (Please specify):
4.	<input type="checkbox"/> System Clients <input type="checkbox"/> System Servers <input type="checkbox"/> Other (Please specify):
5.	<input type="checkbox"/> System Clients <input type="checkbox"/> System Servers <input type="checkbox"/> Other (Please specify):

If you can provide any other relevant “system software technology” information, please do so on the following lines.

Distributed System Services

- A. Please use the following table to identify distributed system services used by the system. Additionally, please list vendor product/technology offering used to implement these services.

Functional Area	Description	Product/Technology
<input type="checkbox"/> Directory Services	The service used to locate and regulate access to networked system resources. (example: Novell Directory Service (NDS), Distributed Computing Environment Cell Directory Service (DCE CDE))	
<input type="checkbox"/> Distributed Naming Services	The service use to manage and distribute associations between logical host names and network addresses. (examples: Domain Name System DNS), Network Information Service(NIS, NIS+))	
<input type="checkbox"/> Distributed Time Services	The service used to synchronize and manage the system clocks of distributed system components (example: Network Time Service (NTS), BSD Unix TimeD))	

If you can provide any other relevant “distributed system services” information, please do so on the following lines.

SYSTEM HARDWARE TECHNOLOGY

A. Using the following table, please describe the system hardware environment.

Hardware	Operating System	Random Access Memory (RAM)	Persistent Storage (Disk Space)	Instructions per Second

If you can provide any other relevant “system hardware technology” information, please do so on the following lines.

System Network Technology

A. For all systems, except Title IV Wide Area Network (TIVWAN), please use the following table to describe the network environment that interconnects system components with each other, with other systems, and with TIVWAN. Please do not provide information about the Department of Education office file/print local area network, unless the system resides on this network.

Network Operating System	Network & Transport Protocol(s) (TCP,IP,IPX, SPX, etc.)	Physical Media (Twisted pair, Co-axial cable, Fiber Optic, etc.)	Topology (Bus, Ring, Star, etc.)	Data Link Technology (Token ring, Ethernet, FDDI, etc)

If you can provide any other relevant “system network technology” information, please do so on the following lines.

Data Volume and Sizing

- A. What is volume size of data managed by the system?_____
- B. What is the estimated annual data volume growth?

- C. Using the following table, please indicate the three most significant transactions processed by the system. Example transactions might include: aid eligibility determination, aid application, and aid payment. Additionally, please specify the transaction type and identify the quarterly processing distribution for each transaction.

Transaction	Transaction Type (Batch or Online)	Transaction Volume			
		Quarter 1 (Jan.-Mar.)	Quarter 2 (Apr. - Jun.)	Quarter 3 (Jul.-Sep.)	Quarter 4 (Oct.-Dec.)
1.					
2.					
3.					

- D. Using the following table, please provide the approximate percentage of expected total annual growth for each transaction listed in the previous table.

Transaction	% Expected Growth (Annually)
1.	
2.	
3.	

If you can provide any other relevant “data volume and sizing” information, please do so on the following lines.

Interface Other Systems

Using the following table, please list the system's external interfaces. Additionally, please identify the interface type and briefly describe these interfaces.

External Entity (Agency, School, Lender, etc.)	Interface Type	Interface Description
1.	<input type="checkbox"/> Title IV WAN <input type="checkbox"/> Tape <input type="checkbox"/> Other (please specify):	
2.	<input type="checkbox"/> Title IV WAN <input type="checkbox"/> Tape <input type="checkbox"/> Other (please specify):	
3.	<input type="checkbox"/> Title IV WAN <input type="checkbox"/> Tape <input type="checkbox"/> Other (please specify):	
4.	<input type="checkbox"/> Title IV WAN <input type="checkbox"/> Tape <input type="checkbox"/> Other (please specify):	
5.	<input type="checkbox"/> Title IV WAN <input type="checkbox"/> Tape <input type="checkbox"/> Other (please specify):	

If you can provide any other relevant "system interface" information, please do so on the following lines.

System Suggestions

What suggestions do you have for improving the current system?
